

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
28 December 2000 (28.12.2000)

PCT

(10) International Publication Number
WO 00/79243 A1

(51) International Patent Classification⁷: **G01N 19/10**,
25/00, 27/00, 27/16, 15/07, 29/00, B32B 5/00, G06F
13/14, 17/00, 11/00

2237 Alcyona Drive, Los Angeles, CA 90068 (US). **ROY, Ajoy** [US/US]; 2385 Oneida Street, Pasadena, CA 91107 (US).

(21) International Application Number: **PCT/US00/16738**

(74) Agents: **SNYDER, Joseph, R.** et al.; Townsend and Townsend and Crew LLP, Two Embarcadero Center, 8th floor, San Francisco, CA 94111-3834 (US).

(22) International Filing Date: **16 June 2000 (16.06.2000)**

(25) Filing Language: **English**

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(26) Publication Language: **English**

(30) Priority Data:
60/139,842 17 June 1999 (17.06.1999) US
09/518,179 2 March 2000 (02.03.2000) US

(71) Applicant (*for all designated States except US*): **CYRANO SCIENCES, INC.** [US/US]; 73 N. Vinedo Avenue, Pasadena, CA 91107 (US).

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

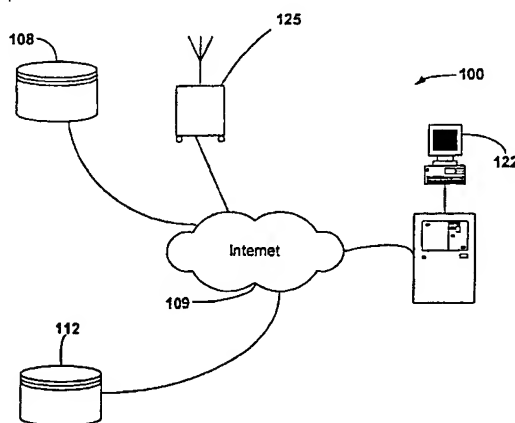
(75) Inventors/Applicants (*for US only*): **SUNSHINE, Steven, A.** [US/US]; 985 S. Oakland Avenue, Pasadena, CA 91106 (US). **STEINTHAL, M., Gregory** [US/US];

Published:

— *With international search report.*

[Continued on next page]

(54) Title: **MULTIPLE SENSING SYSTEM AND DEVICE**



(57) Abstract: The present invention provides a distributed sensing system in a networked environment for identifying (ID) an analyte of interest, including a first sensor array (fixed at 108, or mobile at 125) connected to the network comprising sensors capable of producing a first response in the presence of a chemical stimulus; a second sensor array (fixed at 112) connected to the network comprising sensors capable of producing a second response in the presence of a physical stimulus; and a local or remote computer (122) comprising a resident algorithm with data processing, data comparison, and judgement making capability. The algorithm indicates or selects the most relevant sensor in the network to identify the analyte. The sensors in the two arrays can be separated over large spatial areas, wherein the sensor arrays are networked together across the environment being monitored for analyte presence and ID. Suitable networks include a computer local area network (LAN), an intranet or the Internet (www) (122).

WO 00/79243 A1